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REMARKS/ARGUMENTS

Claims 1-6 stand rejected under 35 USC § 103(a). A telephone interview was conducted between the Examiner and Scott Young, attorney for Applicant, on October 15, 2003 to discuss the pending rejections. The following remarks summarize Applicant's position concerning the pending rejection as discussed during the interview. The remarks are also a complete response to the pending Office Action.

Background

By way of background, cellulose ether is a valuable commercial product produced by reacting a cellulose pulp with an alkali in solution. Prior to reaction, the raw cellulose is ground into the form of a powder so that the alkali solution may more easily permeate into the powdered cellulose, and so that the resultant cellulose ether may more readily dissolve in an aqueous solution.

Cellulose raw materials, such as cotton linter pulp and wood pulp, have traditionally been ground by means of a grinder such as a knife mill. In addition, several alternative methods of grinding have been applied to the grinding of cellulose (see Patent Publications listed on p.1 of application). Although the grinding methods of the past were somewhat acceptable for grinding cellulose for use in a cellulose ether production processes, the invention discloses and claims a substantially improved method of grinding cellulose by using a vertical roller mill. The inventors have found that the manner in which the raw cellulose is ground impacts the effectiveness of the alkali treatment because the grinding method effects both the size and the shape of the ground cellulose particle and therefore the ability of the cellulose particle to react with the alkali. Use of the vertical roller mill to grind the cellulose starting material results in a powdered material having a desired shape and improves the productivity of the cellulose ether production process (see p.4 of application). The use of a vertical roller mill to grind cellulose and the benefits of such grinding were previously unknown.

Rejection under 35 USC § 103

Claims 1-6 stand rejected under 35 USC § 103 over Tanaka in view of Downing. The Tanaka and Downing references are generally concerned with the production of cellulose ether, but there is no motivation to combine the references.

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The Downing reference discloses a method of reducing [grinding] *cellulose* by repeatedly compressing the cellulose between pairs of rollers until the cellulose loses its fibrous appearance. The grinding method disclosed by Downing is very specific. Indeed, the disclosed grinding method is the crux of the Downing patent, so there is absolutely no indication that Applicant's method of using a vertical roller mill to grind cellulose could be used in place of Downing's disclosed grinding method. If anything, Downing's emphasis on the specific grinding method teaches away from the use of a vertical roller mill for the grinding of cellulose.

The Tanaka reference is directed to a method of grinding *cellulose ether* into a powder. The cellulose ether product ground by Tanaka is chemically and physically distinct from the cellulose reactant ground by Applicant. Further, Tanaka grinds a cellulose ether product for the purpose of solubilizing the cellulose ether ([0003] translation of Tanaka) while Applicant grinds a cellulose reactant for the purpose of obtaining a particle size and shape suitable for reaction with an alkali solution (see p.4 of application). In short, Tanaka teaches the grinding of a cellulose ether product (not a cellulose reactant) and there is no teaching in Tanaka that suggests the grinding methods of Tanaka could be used to grind a cellulose reactant.

For the reasons stated above, and most particularly because there is no teaching or suggestion to replace the grinding method of the Downing reference with the particular grinding means of the Tanaka reference, the Tanaka and Downing references are improperly combined. Therefore, the claimed invention is novel and non-obvious in view of the cited references, and Applicant respectfully requests removal of the rejection.

Downing '907 Taken Alone

During the telephone interview, the Examiner indicated that the Downing reference might be considered alone as a 35 U.S.C. 103(a) reference against the claimed invention. However, the emphasis placed upon the particular grinding methods used in Downing and several other publications, such as the Japanese patent publications listed on page 1 of the application, demonstrates that the specific grinding methods used in preparing cellulose are important to the cellulose ester production process. Further, the fact that there are several references directed to specific methods of grinding cellulose indicates that grinding mechanisms may not be arbitrarily substituted for one another, i.e. a vertical roller mill may not be substituted with the multiple

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roller mechanism of Downing without a teaching or suggestion to do so. Downing provides no such teaching or suggestion.

Conclusion

The rejections of record having been addressed above in full, it is submitted that this application is now in condition for allowance, which action is respectfully requested. Should the Examiner have any questions regarding this matter, it is requested that the Examiner contact the undersigned at his convenience to expedite prosecution.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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